

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) An authenticating method for portable radio devices, comprising data communicating means for performing radio communication over a first coverage area and authenticating means for performing authentication of said portable radio devices over a second coverage area, comprising the steps of:

switching coverage area of two or more of said portable radio devices, prior to initiating authentication between the portable radio devices, to be mutually authenticated from the first coverage area to the second coverage area, the second coverage area being smaller than the first coverage area;

bringing, prior to initiating authentication between the portable radio devices, the two or more portable radio devices ~~to be mutually authenticated~~ having the second coverage area to within a proximity of one another so that the coverage areas of the two or more portable radio devices overlap;

initiating mutual authentication by establishing communication between the two or more portable radio devices based only on the bringing of the two or more portable radio devices to within the proximity; and

performing mutual authentication between the two or more portable radio devices by said authenticating means automatically when the coverage area of the two or more portable radio devices overlap[[]; and]]

~~preventing communication with an unintentional portable radio device by
narrowing the coverage area of the two or more portable radio devices before mutual
authentication initiates based on the proximity of the two or more portable radio devices.~~

2. (Previously Presented) The authenticating method for the portable radio devices according to Claim 1, wherein the step of performing the authentication by said authenticating means is performed in a state where a transmission output of said portable radio devices is reduced to shorten a communication distance of said portable radio devices.

3. (Currently Amended) An authenticating method for portable radio devices, comprising data communicating means for performing radio communication over a first coverage area and authenticating means for performing authentication of said portable radio devices over a second coverage area, comprising the steps of:

switching coverage area of a portable radio device, prior to initiating authentication between the portable radio devices, ~~to be mutually authenticated~~ from the first coverage area to the second coverage area, the second coverage area being smaller than the first coverage area;

bringing, prior to initiating authentication between the portable radio devices, the two or more portable radio devices ~~to be mutually authenticated~~ having the second coverage area to within a proximity of one another so that the coverage areas of the two or more portable radio devices overlap; and

performing mutual authentication between two or more portable radio devices by said authenticating means automatically when the coverage area of the two or more portable radio devices overlap[[]; and]]

~~preventing communication with an unintentional portable radio device by narrowing the coverage area of the two or more portable radio devices before mutual authentication initiates based on the proximity of the two or more portable radio devices,~~

wherein a transmission output of only a particular one of said portable radio devices is reduced to shorten a communication distance of said portable radio devices.

4. (Previously Presented) The authenticating method for the portable radio devices according to Claim 2, wherein the transmission output is reduced upon turning-on an authentication button provided on said particular one of said portable radio devices.

5. (Previously Presented) The authenticating method for the portable radio devices according to Claim 1, wherein the step of performing the authentication by said authenticating means is performed in a state where reception sensitivity of said portable radio devices is reduced to shorten a communication distance of said portable radio devices.

6. (Currently Amended) An authenticating method for portable radio devices, comprising data communicating means for performing radio communication over a first

coverage area and authentication means for performing authentication of said portable radio devices over a second coverage area, comprising the steps of:

switching coverage area of a portable radio device, prior to initiating authentication between the portable radio devices, ~~to be mutually authenticated~~ from the first coverage area to the second coverage area, the second coverage area being smaller than the first coverage area;

bringing, prior to initiating authentication between the portable radio devices, the two or more portable radio devices ~~to be mutually authenticated~~ having the second coverage area to within a proximity of one another so that the coverage areas of the two or more portable radio devices overlap; and

performing mutual authentication between the two or more portable radio devices by said authenticating means automatically when the coverage area of the two or more portable radio devices overlap[; and]]

~~preventing communication with an unintentional portable radio device by narrowing the coverage area of the two or more portable radio devices before mutual authentication initiates based on the proximity of the two or more portable radio devices,~~

wherein a reception sensitivity of only a particular one of said portable radio devices is reduced to shorten a communication distance of said portable radio devices.

7. (Previously Presented) The authenticating method for the portable radio devices according to Claim 5, wherein the reception sensitivity is reduced upon turning-on an authentication button provided on said particular one of said portable radio devices.

8. (Canceled)

9. (Currently Amended) A portable radio device comprising:

data communicating means for performing radio communication over a first coverage area; [[and]]

authenticating means for performing authentication over a second coverage area of said portable radio device[[,]]; and

switching means for switching the coverage area of said portable radio device, prior to initiating authentication between the portable radio devices, to be authenticated from said first coverage area to said second coverage area, said second coverage area being smaller than said first coverage area;

wherein said authenticating means of said portable radio device initiates initiating mutual authentication between two or more portable radio devices based only on the bringing of the two or more portable radio devices to within a proximity such that the coverage areas of the two or more portable radio devices overlap; and

wherein said authenticating means of said portable radio device performs performing mutual authentication between the two or more portable radio devices automatically when the two or more portable radio devices are brought in proximity to one another so that the second coverage areas overlap[[,]]

~~wherein communication with an unintentional portable radio device is prevented by narrowing the coverage area of the two or more portable radio devices before mutual authentication initiates based on the proximity of the two or more portable radio devices.~~

10. (Previously Presented) The portable radio device according to Claim 9, wherein said authenticating means performs the authentication in a state where a transmission output of said plurality of portable radio devices is reduced to shorten a communication distance of said portable radio devices.

11. (Currently Amended) A portable radio device comprising:
data communicating means for performing radio communication over a first coverage area; ~~[[and]]~~
authenticating means for performing authentication over a second coverage area of said portable radio device~~[[,]]~~; and

switching means for switching the coverage area of said portable radio device, prior to initiating authentication between the portable radio devices, ~~to be authenticated~~ from said first coverage area to said second coverage area, said second coverage area being smaller than said first coverage area;

wherein said authenticating means of said portable radio device performs ~~performing~~, in a condition where a plurality of portable radio devices exist, mutual authentication between two or more portable radio devices automatically when the two or more portable radio devices are brought in proximity to one another so that the second coverage areas overlap,

~~wherein communication with an unintentional portable radio device is prevented by narrowing the coverage area of the two or more portable radio devices before mutual~~

~~authentication initiates based on the proximity of the two or more portable radio devices,~~
and

wherein a transmission output of only a particular one of said portable radio devices is reduced to shorten communication distance of said portable radio devices.

12. (Previously Presented) The portable radio device according to Claim 10, wherein the transmission output is reduced upon turning-on an authentication button provided on said particular one of said portable radio devices.

13. (Previously Presented) The portable radio device according to Claim 9, wherein said authenticating means performs the authentication in a state where reception sensitivity of said portable radio devices is reduced to shorten a communication distance of said portable radio devices.

14. (Currently Amended) A portable radio device comprising:
data communicating means for performing radio communication over a first coverage area; ~~[[and]]~~
authenticating means for performing authentication over a second coverage area of said portable radio device~~[[,]]~~; and

switching means for switching the coverage area of said portable radio device, prior to initiating authentication between the portable radio devices, to be authenticated from said first coverage area to said second coverage area, said second coverage area being smaller than said first coverage area;

wherein said authenticating means performs ~~of said portable radio device~~
~~performing~~, in a condition where a plurality of portable radio devices exist, mutual
authentication between two or more portable radio devices automatically when the two
or more portable radio devices are brought in proximity to one another so that the
second coverage areas overlap,

~~wherein communication with an unintentional portable radio device is prevented~~
~~by narrowing the coverage area of the two or more portable radio devices before mutual~~
~~authentication initiates based on the proximity of the two or more portable radio devices,~~
and

wherein a reception sensitivity of only a particular one of said portable radio
devices is reduced to shorten communication distance of said portable radio devices.

15. (Previously Presented) The portable radio device according to Claim 13,
wherein the reception sensitivity is reduced upon turning-on an authentication button
provided on said particular one of said portable radio devices.

16. (Canceled)

17. (Currently Amended) An authenticating method for mobile radio devices,
comprising the steps of:

providing a plurality of mobile radio devices, each of said plurality of mobile radio
devices comprising data communicating means for performing radio communication and
authenticating means for performing authentication of said mobile radio devices;

reducing, prior to initiating authentication, the coverage areas of the mobile radio devices;

initiating mutual authentication by establishing communication between two or more radio devices based only on the bringing of the two or more radio devices to within a proximity such that the coverage areas of radio waves generated by the two or more mobile radio devices overlap; and

performing mutual authentication between two or more mobile radio devices by said authenticating means automatically when the two or more mobile radio devices come sufficiently closer to each other that coverage areas of radio waves generated by the two or more mobile radio devices overlap; ~~and~~

~~preventing communication with an unintentional mobile radio device by narrowing the coverage area of the two or more mobile radio devices before mutual authentication initiates based on the proximity of the two or more mobile radio devices.~~